

SEMINOV, S.P.

Synapses in cardiac ganglia of the cat during its postembryonic period of life. Nauch.dokl.vys.shkoly; biol.nauki no.2:53-55 '60.
(MIRA 13:4)

1. Rekomendovana kafedroy anatomii i gistologii Leningradskogo gosudarstvennogo universiteta im. A.A. Zhdanova.
(NERVES, CARDIAC)

EXCERPTA MEDICA Sec 20 Vol. 1/2 Geriatrics Aug 58

240. *Age changes in the sensory nerve apparatus of the auricular endocardium in cat (Russian text)* SEMENOV S. P. Dept. of Anat. and Histol., Soil-Biol. Fac., Leningrad Univ., Leningrad *Ark. Anat. Gistol. Embriol.* 1957, 34/2 (79-82) Illus. 3

Study by Gross-Bielschowsky's method showed that sensory nerve endings undergo a significant reconstruction in the postembryonic period of life. On the first days following birth, the endings in endocardium have the appearance of bushes, the branches of which terminate in loops or in bulbs. In the process of development dense plexuses of sensory nerve fibres convert into loose ones, while the loose and in most part free endings formed by them become compact and non-free. Receptors resembling those of adult animals appear at the age of 2 months. Receptors characteristic of adult animals, non-free and looking like compact particles are formed at the age of 8-9 months.

SEMENOV, S. P., Cand of Bio Sci -- (diss) "Development of receptors in the walls of the pericardium in cats in the post-embryonic period." Leningrad, 1957, 15 pp (Leningrad State University im A. A. Zhdanov), 100 copies (KL, 35-57, 107)

SEMENOV, S.P.

Electron microscopy of the interneuron synapses. Arkh. anat. gist.
i embr. 42 no.2:112-121 F '62. (MIRA 15:2)

1. Kafedra anatomii i gistologii (zav. - chlen-korrespondent AMN
SSSR prof. P.V.Makarov) Leningradskogo gosudarstvennogo universiteta.
Adres avtora: Leningrad, Universitetskaya nab., 7/9. Kafedra
anatomii i gistologii biologo-pochvennogo fakul'teta Leningradskogo
gosudarstvennogo universiteta.
(NERVOUS SYSTEM) (ELECTRON MICROSCOPE)

SEMENOV, S.P.

Sources of sensitive innervation of peripheral and vegetative
nerve elements of the heart. Dokl. AN SSSR 143 no.5:1202-
1204 Ap '62. (MIRA 15:4)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
Predstavleno akademikom Ye.N.Pavlovskim.
(HEART--INNERVATION)

SEMENOV, S.P. (Leningrad, M-84. Obvodnyy kanal, 96, kvartira 51)

Experimental morphological study of afferent endings of different cardiac nerves. Arkh. anat. gist. i embr. 45 no.9: 72-83 S'63 (MIRA 17:3)

1. Kafedra anatomii i gistologii (zav. - chlen-korrespondent AMN SSSR prof. P.V. Makarov) Leningradskogo ordena Lenina gosudarstvennogo universiteta.

SEMENOV, S.P.

Methodology of surgical approach to the stellate ganglion. Biul.
eksp. biol. i med. 55 no.4:124-125 Ap '63.

(MIRA 17:10)

1. Iz kafedry anatomii i gistologii (zav. - chlen-korrespondent
AMN SSSR prof. P.V. Makarcv) Leningradskogo ordena Lenina gosudarst-
vennogo universiteta imeni A.A. Zhdanova. Predstavlena deystvitel'-
nym chlenom AMN SSSR Ye.N. Pavlovskim.

SEMENOV, S.P.

Endings of various nerves in the heart ganglia of a cat. Trudy
Len. ob-va est. 74 no. 1:68-70 '63. (MIRA 17:9)

SEMEIOV, Severin Pavlovich; MAKAROV, P.V., prof., otv. red.;
MATVEYEVA, V.V., red.

[Morphology of the vegetative nervous system and
interoceptors] Morfologiya vegetativnoi nervnoi sistemy
i interoretseptorov. Leningrad, Izd-vo Leningr. univ., ..
1965. 157 p. (MIRA 18:9)

1. Chlen-korrespondent AMN SSSR (for Makarov).

SEIMEN, S.P.

SEIMEN, S.P.

Vagus nerve terminations in different tissues of heart atria.

Vest LGU 16 no.21:101-112 '61.

(REF. 14:11)

(NERVES, CARDIAC)

(VAGUS NERVE)

SEMENOV, S.P.

Some disputable problems concerning the innervation of the heart.
Trudy Len. ob-va est. 72 no.1:102-104 '61. (MIRA 15:3)
(NERVES, CARDIAC)

SEMENOV, S.R., redaktor; MADEINSKAYA, A.A., tekhnicheskiiy redaktor

[Innovators of the Karaganda coal basin: stories of leaders in socialist competition] Novatory Karagandinskogo ugol'nogo basseina; rasskazy передовиков sotsialisticheskogo sorevnovaniia. Moskva, Ugletekhizdat, 1954. 45 p. (MLRA 8:6)
(Karaganda Basin--Coal mines and mining)

SHUKHARDIN, S.V., kandidat tekhnicheskikh nauk; SEMENOV, S.R., redaktor; NADEINSKAYA, A.A., tekhnicheskiiy redaktor.

[First Soviet coal cutter-loader] Pervyi sovetskii ugol'nyi kombain. Moskva, Ugletekhizdat, 1954. 58 p. (MLRA 8:1)
(Coal-mining machinery)

SEMENOV, S. R.

United team of many stopes. Sov.profsoiuzy 6 no.16:38-40
N '58. (MIRA 12:2)
(Rostov Province--Coal mines and mining)

SHUMKOV, V.; KORNEYEV, V.; MAKSIMOV, M.; CHUMAK, B. (g.Lugansk)
SEMENOV, S. R. (g.Shakhty, Rostovskoy oblasti); LERNER, I. (g.Shakhty,
Rostovskoy oblasti)

Our women heroes. Mast. ugl. 9 no.5:9-11 My '60.

(MIRA 13:7)

(Women as miners)

SEMENOV, S. R., Dr. Medic. Sci. (diss) "Action of Chloral Hydrate and Hexenal in Case of Disruption of Function of Some Endocrine Glands," Irkutsk, 1961, 45 pp. (Sverdlovsk Medic. Inst.) 200 copies (KL Supp 12-61, 282).

SEMENOV, S.S.

120-4-10/35

AUTHORS: Ovchinnikov, Ye.P. and Semenov, S.S.
 TITLE: Increasing the Efficiency of Ionisation and Proportional
 Counters (Povysheniye effektivnosti raboty ionnizatsionnykh
 kamer i proporsional'nykh schetchikov)
 PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.4,
 pp.39-43 (USSR)

ABSTRACT: Ionisation and proportional counters are widely used in nuclear radiation studies. Small resolving power and sensitivity are their main shortcomings. This is connected with the input circuit of the recording device. An ionisation or proportional counter can be looked upon as a current generator with a very high internal resistance which is necessarily shunted by the capacitance of the radiation detector and the input capacity of the amplifier. A reduction in the shunting capacitance leads to an increase in the signal amplitude and a reduction in its length. Consequently, the present authors have considered electronic devices which compensate for the input capacitance (Refs. 1-3). Compensation of the self capacitance of radiation detectors allows the construction of large multi-section ionisation cameras and counters; the effective input capacitance in such cases being of the order of a few picofarads. The compensation of the input capacitance is often

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SEMENOV, S. S.

24-11-27/31

AUTHORS: Vasil'yev, L. A., Semenov, S. S. and Tarantov, Ye. A. (Moscow)

TITLE: Study of the physical processes inside a shock tube by means of high speed photography. (Izucheniye fizicheskikh protsessov v udarnoy trube pri pomoshchi vysokoskorostnogo fotografirovaniya).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No. 11, pp. 186-188 + 2 plates.

ABSTRACT: Hertzberg (Ref. 2) has investigated shock waves by means of a film camera with a filming speed of 13 000 frames per second. This speed is too low for detailed investigation of the process since numerous details are blurred and neither the main shock wave nor their contact surface can be observed on the thus produced exposures. In the here described experiments, a set-up was used which enables a filming speed of 100 000 frames per second, a sketch of which is shown in Fig. 1, p. 186; thus, it was possible to obtain a complete picture of the flow around the model for each 10 μ secs. The data obtained for wedge-shaped models and for the angles of propagation of weak disturbances in the flow can be utilised for evaluating the thermodynamic properties of

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SEMENOV, S.S.

AUTHOR: LOGUNOV, V.N., OVCHINNIKOV, YE.P., RUSANOV, V.D., PA - 3572
SEMENOV, S.S.

TITLE: Nonstationary Circulating Current by Electron Injection in Betatron.
(Nestatsionarnyy tsirkuliruyushchiy tok pri inzhektionsii elektronov
v betatron, Russian)

PERIODICAL: Zhurnal Tekhn. Fiz. 1957, Vol 27, Nr 5, pp 1143-1148 (U.S.S.R.)

ABSTRACT: The experiments were carried out in a 30 MeV synchrotron with betatron injectors. Measuring of the amount and form of the current was carried out by means of an induction connection between the current in the chamber and the receiving coil near the chamber. A receiving- and registering apparatus with high reactivity was constructed. This made it possible to observe current modifications in the chamber during some revolutions of the particles. The main difficulties are described which had to be overcome in constructing this apparatus.

After a detailed description of the apparatus and the experiment the following conclusions were arrived at:

- 1.) The absolute amount of the circulating current in the chamber is determined at optimum conditions by the limiting charge which is bound by the stabilizing forces of the magnetic field. Therefore also the γ -bremsstrahlung is determined by the limiting charge.

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AUTHOR:

Semenov, S. S.

20-114-4-44/63

TITLE:

A Method of Checking the Equation of State for Gases at High Temperature (Metod proverki, uravneniya sostoyaniya gazov pri vysokoy temperature)

PERIODICAL:

Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 841-843 (USSR)

ABSTRACT:

For the examination of the properties of gases at high temperatures a shock tube ("udarnaya truba") has recently been used. The present paper discusses the method of checking the equation of state and the determination of the dissociation and ionisation of gases in the shock tube. It is well-known that behind the front of the incoming and the reflected shock wave there are larger zones of relaxation in which the thermodynamic equilibrium is lacking. Furthermore, the creation of a boundary layer on the wall of the shock tube influences the gas velocity behind the incoming wave. This layer causes the interaction of the reflected wave with the former, which leads to errors of computation. It is known that the front of the wave does not have to coincide with the beginning of luminescence; this might lead to errors as regards the

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A Method of Checking the Equation of State for Gases at
High Temperature

20-114-4-44/63

- 3) The angle values are the chief experimental results; they may be measured simply and accurately. Corrections regarding the presence of a boundary layer in the sample are very small and easy to determine.
- 4) The influence of the boundary layer on the walls of the tube is considerably diminished.
- 5) The angle values of the shock are comparatively independent of the velocity of the impinging wave and of the pressure in the gas at rest before this latter.
- 6) The method is general and can be used for checking the equation of state of any gas in a wide range of temperature and pressure.

From the results obtained it may be concluded that the dissociation energy of nitrogen is

$D_{N_2} = 9,76$ eV and that the thermodynamic functions of the

air, which are based upon this energy value, are very close to the true values.

There are 2 figures and 13 references, 3 of which are Soviet.

Card 3/4

SOV-120-58-1-10/43

AUTHORS: Logunov, V. N. and Semenov, S. S.

TITLE: Internal Injection of Electrons in a Betatron
(O vnutrenney inzhetskii elektronov v betatrone)

PERIODICAL: Priory i Tekhnika Eksperimenta, 1958, Nr 1, pp 49-50
(USSR)

ABSTRACT: It has been shown (Refs.1 and 2) that the work of a betatron is still possible when the injector is placed on the inner side of the stable orbit. However, there is no information in the literature on the effectiveness of the internal as compared with external injection of electrons in the betatron. This would be of interest in the determination of the possible mechanism of capture of electrons into the betatron acceleration regime and also in the elucidation of the possibilities of practical application of internal injection. Two injectors have been tried by the authors, placed both on the inner and the outer side of the stable orbit. The work was carried out in conjunction with the 30 MeV cyclotron of the Lebedev Physical Institute. The photograph of the internal injector is shown

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SOV-120-58-1-10/43

Internal Injection of Electrons in a Betatron.

in Fig.1. The electron optical system of the internal injector was an exact replica of the electron optics of an external injector in the form of the usual 3 electrode device. Measurements of the intensity of γ -rays have shown that the absolute magnitude of this intensity is the same for the internal injector as for the external injector with the same injection parameters. Figs.2 and 3 show the intensity of the γ -rays as a function of the emission current of the injector and its position. The curves are identifiable for both the internal and the external injectors. It is concluded that the position of the injector relative to the equilibrium orbit is immaterial. There are 3 figures, no

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SOV-120-58-1-10/43

. Internal Injection of Electrons in a Betatron.

tables and 2 English references.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR
(Institute of Physics im. P. N. Lebedev, Academy of Sciences
USSR)

SUBMITTED: July 3, 1957.

1. Betatrons--Design 2. Betatrons--Performance 3. Betatrons
--Equipment 4. Electron capture

Card 3/3

2/2000
AUTHORS: Logunov, V.N. and Semenov, S.S.
TITLE: Contractor for a Betatron
PERIODICAL: Pribery i tekhnika eksperimenta, 1959, Nr 5,
pp 122 - 123 (USSR)
ABSTRACT: A description is given of a contractor circuit used to ensure maximum γ -ray intensity, using the 30 MeV synchrotron of the Physics Institute of the Ac.Sc., USSR. It is claimed to be more stable than those described so far. The circuit may be used to ensure a greater rate of change of magnetic flux at low consumed power. Three copper turns were placed in the median plane, as shown in Figure 1. The three turns were then connected to the electronic circuit on the left of Figure 3. The input valve is a 6N5S double triode. The maximum voltage on the anodes of the valves reaches 180 V and the valves are cut off by a negative bias of 150 V. At the instant of injection, a positive rectangular pulse having an amplitude of 150 V is applied to the control grids of the valves. The duration of the pulse is 10 μ s, the rise time of the leading edge is 0.4 μ s and the duration of the tail 4

Card1/2

41434

S/120/62/000/005/006/036
E039/E420

24.6740

AUTHORS: Logunov, V.N., Semenov, S.S.

TITLE: The influence of focusing the injector on the intensity of betatron gamma radiation

PERIODICAL: Pribery i tekhnika eksperimenta, no.5, 1962, 35-37

TEXT: A normal three electrode betatron injector is arranged so that its beam divergence can be reduced from 20° to 3.5° by means of a diaphragm slit. For optimum phase conditions and constant voltage on the injector the gamma radiation intensity is slightly higher for the 3.5° beam than for the 20° beam. An examination of the trapping of electrons in the betatron regime shows that coulomb interactions play a large part and that bad focusing leads to the formation of a space charge mainly near the injector. The results indicate that the optimum divergence of the beam lies in the range 20 to 25° which confirms earlier measurements on the Physics Institute synchrotron working in the betatron regime. By varying the voltage on the injector with a beam divergence of 20° the gamma radiation intensity passes through a maximum at ~ 22 KV for a beam current of $50 \mu\text{A}$ and ~ 24 KV for a beam

Gard 1/2

The influence of focusing ...

S/120/62/000/005/006/036
E039/E420

current of 100 μ A. The effect of collective interaction is displayed at higher electron densities in the beam. There are 6 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR
(Physics Institute AS USSR)

SUBMITTED: December 21, 1961

Card 2/2

ACCESSION NR: AT3012931

S/2504/63/019/000/0151/0157

AUTHORS: Logunov, V. N.; Semenov, S. S.

TITLE: Dependence of betatron Gamma Ray intensity on the main parameters of internal electron injection

SOURCE: AN SSSR. Fizicheskiy institut. Trudy*, v. 19, 1963, 151-157

TOPIC TAGS: betatron, electron injection, betatron Gamma ray intensity, internal injection, external injection, capture efficiency, Gamma bremsstrahlung intensity, Coulomb interaction force

ABSTRACT: To compare the efficiencies of internal and external injection in a betatron, two injectors were installed in the central plane of the betatron at equal distances inside and outside the equilibrium orbit. Two pulsed generators were used, one producing a triangular injection pulse and the other a trapezoidal one with variable flat top duration and with variable leading and trailing

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ACCESSION NR: AT3012931

front slopes. Measurements of the intensity of the γ -ray bremsstrahlung have shown that the absolute intensity obtained with both types of injectors is the same for equal injection parameters. The same pertains to comparisons of the capture region, dependence of the capture efficiency on the emission current, the dependence of the capture efficiency on the form of the injection pulse. Experiments on the influence of the electron Coulomb interaction forces on the capture efficiency were made with an additional injector placed in the chamber 30° in azimuth from the main injector and producing a secondary time-varying electron cloud localized in azimuth. At small main-injector emission currents the capture efficiency was greatly increased by the auxiliary injector, but with increasing main emission current the auxiliary injector became less and less effective. This is attributed to the production of an electron cloud by the main injector. The damping produced by multiple collisions between electrons, which can contribute to the capture of electrons in the betatron acceleration mode, is also considered

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ACCESSION NR: AT3012931

briefly. The net conclusion is that the position of the injector relative to the equilibrium orbit is immaterial. Orig. art. has: 6 figures and 5 formulas.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR
(Physics Institute, AN SSSR)

SUBMITTED: 00

DATE ACQ: 05Sep63

ENCL: 00

SUB CODE: PH

NO REF SOV: 004

OTHER: 001

Card 3/3

S/0139/64/000/001/0141/0146

ACCESSION NR: AP4020308

AUTHORS: Ovchinnikov, Ye. P.; Semenov, S. S.

TITLE: Acceleration region in circular phasotron

SOURCE: IVUZ. Fizika, no. 1, 1964, 141-146

TOPIC TAGS: phasotron, magnetic field, angular frequency, modulation program, sawtooth pulse, induction acceleration, particle capture, critical energy

ABSTRACT: An acceleration system has been described as a new version of the one developed by A. A. Kolomenskiy and others (Proceedings of the Intern. Conf. on High-Energy Accelerators and Instrumentation CERN, str. 89, 1959), represented by a symmetric circular phasotron with maximum acceleration energy of 30 Mev. Because the magnetic field of the circular phasotron is constant with respect to time, the particle angular frequency is defined solely by its energy E, or

$$f(E) = f_{inj} \frac{E_{inj}}{E} \left(\frac{E^2 - E_0^2}{E_{max}^2 - E_0^2} \right)^{\frac{n}{2(n+1)}}$$

where $f = 16.0$ mc. The modulation program for the frequency and the amplitude of

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ACCESSION NR: AP4020308

the high-frequency acceleration potential are represented graphically as a function of time up to 4×10^{-5} seconds. The frequency remains almost constant at 30 mc and E varies from 0 to 30 Mev. To compensate for energy loss by radiation a sawtooth pulse modulation is applied to the frequency in the 29-31 mc frequency range by a 100-cycle frequency. The operation program is represented first by carrying the particles in the induction acceleration regime to a maximum energy and investigating the possibility of increasing the mean energy of the instrument by increasing the injection time. Subsequently, the particles are carried in the phasotron acceleration region by using both high-frequency channels and particle capture going through the critical energy. "This work was done in Professor A. A. Kolomenskiy's group. The theoretical contributions were made by colleagues A. N. Lebedev and A. P. Fateyev, to whom the author expresses his gratitude." Orig. art. has: 4 figures and 4 equations.

ASSOCIATION: Fizicheskii Institut imeni P. N. Lebedeva AN SSSR (Institute of Physics, AN SSSR)

SUBMITTED: 09Aug62

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: QP

NO REF SOV: 004

OTHER: 007

Card 2/2

ACCESSION NR: AP4041028

S/0120/64/000/003/0113/0115

AUTHOR: Semenov, S. S.

TITLE: Pulsed betatron acceleration in an annular synchrocyclotron

SOURCE: Priory* i tekhnika eksperimenta, no. 3, 1964, 113-115

TOPIC TAGS: annular synchrocyclotron betatron core, betatron core power supply, pulsed power supply, betatron, synchrocyclotron, particle accelerator

ABSTRACT: A model of the electric circuit of a pulsed power supply, for a betatron core of a symmetric annular synchrocyclotron, which makes possible the production of current pulses of uniform or alternating polarity, is described. During the acceleration of particles in one direction, the efficiency of accelerator operation increases twofold because of the utilization of the reverse half-wave of the current recharging the capacitor bank. The direct and reverse half-waves of current are identical because of the automatic full-wave charge from a single rectifier. The interval between half-waves can be infinitely large. Of special interest is the possibility

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ACCESSION NR: AP4041028

of the application of the circuit generating current of a single polarity as a power-supply of a betatron electromagnet. In contrast to a usual power supply circuit, a maximum value of eddy electro-motive force at the moment of injection can be obtained. In addition, the required energy of accelerated electrons during experiments performed on a betatron very often is lower than the maximum possible for this accelerator. By changing the capacitance and thus lowering the amplitude of the current in the electromagnet windings, it is easy to raise the repetition frequency of accelerating cycles and to approach the limiting temperature conditions for operation of the electromagnet. Orig. art. has: 6 formulas and 3 figures.

ASSOCIATION: Fizicheskii institut AN SSSR (Institute of Physics, AN SSSR)

SUBMITTED: 27Jul63

ATD PRESS: 3064

ENCL: 00

SUB CODE: NP

NO REF SOV: 002

OTHER: 000

Card 2/2

ACCESSION NR: AP4041029

S/0120/64/000/003/0116/0118

AUTHOR: Semenov, S. S.

TITLE: Frequency-modulated generator using ferrite-containing lines

SOURCE: Pribery* i tekhnika eksperimenta, no. 3, 1964, 116-118

TOPIC TAGS: fm generator, ferrite filled coaxial cable, cyclotron accelerating chamber, radiation loss compensation, buncher

ABSTRACT: A 1-kw FM generator using ferrite-filled sections of coaxial cable as its resonance circuit is described. Frequency retuning within the 15—35-Mc band is accomplished by magnetizing the ferrites. The generator is intended for compensation of radiation energy losses during the accumulation of electrons in a symmetrical FM cyclotron, as well as for experimental investigation of acceleration regimes. It develops a voltage of 150v (15—35 Mc) across the slit of the accelerating chamber. A ferrite buncher is used in the generator output stage. It consists of two identical parallel sections of coaxial line with the ferrite rings ($\mu = 120$) located inside them. The length and inner dimensions of these sections are chosen so that the

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ACCELERATION NR: AP4041029

characteristic impedance of the equivalent resonance circuit is maximum. The minimum value of load resistance for the output stage is 800 ohm. The entire frequency band is covered when the current in the magnetizing winding varies from 0.1 to 1.1 amp. To set the oscillations in the output stage, either a power amplifier or resonance stage with GU-29 vacuum tubes can be used. An oscillatory circuit, which is formed by vacuum-tube capacitance and two parallel-connected short-circuited sections of ferrite-filled coaxial line, serves as a load for the resonance stage. Orig. art. has: 3 figures and 1 formula.

ASSOCIATION: none

SUBMITTED: 05Nov63

ATD PRESS: 3049

ENCL: 00

SUB CODE: EG, NP

NO REF SOV: 001

OTHER: 005

Card 2/2

L 34161-65 EEC-4/EEC(k)-2/EM(d) Pg-4/Pk-4/Pl-1/Pb-4/Pq-4

ACCESSION NR: AP5007371

S/0286/65/000/004/0034/0034

AUTHOR: Semenov, S. S.

TITLE: Push-pull current-pulse modulator with an inductive load. Class 21, No. 168327

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 34

TOPIC TAGS: pulse modulator, push pull pulse modulator

ABSTRACT: In order to shorten the duration of both the leading and the trailing edges of pulses and to permit the use of a low plate-voltage source, the load of the proposed modulator is designed in the form of a variable inductor utilizing sections of a coaxial line. The load is series-connected to a choke and divided into two symmetrical parts, each connected to a modulator plate circuit. Orig. art. has: 1 figure. [DW]

ASSOCIATION: Fizicheskii institut im. P. N. Lebedeva AN SSSR (Institute of Physics, AN SSSR)

Card 1/2

BEREZIN, B.I., ed.; KOZAROVITSKIY, L.A., ed.; MEDVEDEV,
Ye.M., ed.; POPOVA, A.L., ed.; POPIYADUKHIN, P.A., ed.
SEMENOV, S.S., ed.; SOPOVA, O.I., ed.

[Transactions of the Conference on the Scientific Basis
of the Processes of Printing and Methods for Their
Improvement] Trudy Konferentsii po nauchnym osnovam pro-
tssessov pechataniya i putyam ikh sovershenstvovaniya, Mo-
skva, Nauchno-tekhn. ob-vo poligr. i izdatel'stv. No.1.
1961. 44 p. (MIRA 18:5)

1. Konferentsiya po nauchnym osnovam protsessov pechata-
niya i putyam ikh sovershenstvovaniya, Moscow, 1961.

L 4897-66

ACC NR: AP5027021

SOURCE CODE: UR/0120/65/000/005/0113/0115

AUTHORS: Voronin, V. S.; Semenov, S. S.

ORG: Physics Institute, AN SSSR, Moscow (Fizicheskii institut, AN SSSR)

TITLE: Wideband d-c amplifier with small zero drift

SOURCE: Pribery i tekhnika eksperimenta, no. 5, 1965, 113-115

TOPIC TAGS: dc amplifier, amplifier design

ABSTRACT: The circuit and operation of a wideband d-c amplifier with small zero drift are described. The gain of the amplifier is 5×10^4 ; the frequency band is 0 to 20 kc, the maximum output voltage is ± 80 v, and the zero drift at the input is ± 50 μ v. Parallel operation of a wideband dc amplifier and a narrowband dc amplifier with conversion is used. The amplifier utilizes extreme negative feedback for stability of operation and coupling of overlapping narrow and wideband frequency characteristics. The amplifier has been used in an excitation coil supply system of a ring phasotron electromagnet. Orig. art. has: 9 formulas and 3 figures. [04]

Card 1/2

UDC: 621.375

09010815

L 4897-66

ACC NR: AP5027021

SUB CODE: EC/ SUBM DATE: 26Dec64/ ORIG REF: 001/ ATD PRESS: 4135-8

60
Card 2/2

L 00073-66 EWT(1)/EPA(s)-2/ETC/ENG(m)/EWA(h) TT/AT

ACCESSION NR: AP5021351

UR/0120/65/000/004/0148/0152
621.316.722.1

AUTHOR: Voronin, V. S.; Semenov, S. S.

TITLE: Stabilization of DC generator voltages

SOURCE: Pribery i tekhnika eksperimenta, no. 4, 1965, 148-152

TOPIC TAGS: electric generator, voltage stabilization, voltage stabilizer, direct current, current stabilization

ABSTRACT: The peculiarities of the magnetic field of the annular synchrocyclotron (its high inhomogeneity and strict accuracy requirements) led to the development of a new type of magnetic system containing distributed excitation windings. An essential feature of this new solution is the almost complete transfer of the accuracy requirements imposed on the currents within the electromagnet coils to the pulsation and instability of the power supply voltage within a large band of audio frequencies. This is caused by the low inductance of the distributed windings. This inductance becomes even sharply smaller with the increase in frequency than is the case in the standard constant electromagnets. The present authors describe the voltage stabilization circuit of two P-101 DC generators

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L 00073-66

ACCESSION NR: AP5021351

(65 kW, 230 V, 282 A) driven by a synchronous motor. The accuracy is $3 \cdot 10^{-4}$. The stabilization and oscillation damping of the output voltage is carried out by two groups of 6S19S regulator tubes connected in parallel with the excitation windings of the generator and parallel to the load. The calculation of the system is carried out by inspection of the Bodet logarithmic frequency characteristics and of the terminal phase characteristics. The introduction of the new stabilization scheme allows, at low equipment cost, the use of DC generators as sources of highly stabilized currents or voltages. Orig. art. has: 6 formulas and 5 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR, Moscow (Physics Institute, AN SSSR)

SUBMITTED: 16Nov64

ENCL: 00

SUB CODE: EE

NO REE SOV: 002

OTHER: 000

JW

Card 2/2

SEMENOV, S.S.; GLUSHENKOVA, Ye.V.; BROY-KARRE, G.V.; DOKSHINA, N.D.;
TUMANOVA, Ye.S.

Obtaining benzenecarboxylic acid by oxidizing the residues
of generator shale tar and phenols boiling above 300° C.
Trudy VNIIT no.12:69-77 '63. (MIRA 18:11)

KOBYL'SKAYA, M.V.; PYSHKINA, N.I.; SEMENOV, S.S.; KUZNETSOVA, O.A.

Improving the production of MS-25 alkyd-styrol lacquer.
Trudy VNIIT no.12:78-82 '63. (MIRA 18:11)

SEMENOV, S.S.; KOBYL'SKAYA, M.V.; KUZNETSOVA, O.A.; SOLOV'YEV, Yu.A.;
ZAV"YALOV, V.G.; MASHIN, V.N.; VELITSKAYA, O.Ya.;
PETRUNIN, M.M.; RIF, L.L.

Starting a pyrolysis unit for chamber gasoline in the V.I.
Lenin Oil Shale Processing Combine. Trudy VNIIT no.12:64-68
'63. (MIRA 18:11)

GLUSHENKOVA, Ye.V.; LIYEVA, V.Yu.; SEMENOV, S.S.; ZABRODKIN, A.G.;
GONCHAROV, V.I.; KALASHNIKOVA, Ye.B.

Adhesive resins from shale phenols of nonalkaline separation.
Trudy VNIIT no.12:83-89 '63. (MIRA 18:11)

DYMSHITS, S.A.; BITUK, S.M.; PARSHINA, Ye.P.; ORLOVA, N.S.;
SEMENOV, S.S.; BROV-KARRE, G.V.

Potential content of water soluble phenols in generator
tar and the optimal conditions for their separation. Trudy
VNIIT no.12;102-108 '63. (MIRA 18:11)

KOBYL'SKAYA, M.V.; KORNILOV, M.F.; SEMENOV, S.S.; PYSHKINA, N.I.;
PUSTOVALOVA, Ye.K.; KUZNETSOVA, O.A.; Prinimali uchāstiye:
KSENOFONTOVA, teknik; AYZENBERG, Z.M., teknik; LOBANOVA, E.M.,
tekhnik

Using acid asphalt for the preparation of superphosphate
phosphorous fertilizer. Trudy VNIIT no.12:119-129 '63.
(MIRA 18:11)

VORONIN, V.S.; SEMENOV, S.S.

Wide-band d.c. amplifier with small zero drift. Prib. i tekhn.
eksp. 10 no.5:113-115 S-O '65.

(MIRA 19:1)

1. Fizicheskiy institut AN SSSR, Moskva. Submitted Dec.28,
1964.

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
B-1-3																			
Preparation of film-producing substances from tars obtained from aromatisation of the middle fractions of shale pitch. A. V. Koshevnikov and S. S. Samanov. (Prom. Org. Chim., 1937, 4, 659-664).—The residue of tar remaining from pyrolysis of shale pitch is nitrated at 0°, and the washed product incorporated with rosin, linseed oil, and drier, to yield a good-quality stove enamel. R. T.																			
AS 4-51A METALLURGICAL LITERATURE CLASSIFICATION																			
SIGNATURE										SIGNATURE									
DATE										DATE									

SEMEHOV, S. S.

SEMEHOV, S. S. and GUREVICH, B. Ye.

"Concerning the Stability of Diesel Fuels from Tars of the Baltic Semi-Coking Shales," translated from the monograph "The Chemistry and Technology of Products Obtained from Shales," pp. 102-105, State Scientific and Technical Publishing House for Literature on Petroleum and Mined-Fuel, Leningrad Section, Leningrad, 295 pp., 1954

D 241655, 18 May 55

SEMENOV, S.S.

1200. SEPARATION OF NEUTRAL OXYGEN COMPOUNDS IN THE MIDDLE FRACTIONS OF SHALE TAR. Semenov, S.S. and Gurevich, B.E. (Izv. Vsesoyuz. nauch.-issled. Inst. Pererab. Glan. (Proc. Inst. Treat. Shale, U.S.S.R.), 1954, (2), 49-56; abstr. in Ref. Zh. Khim. (Ref. J. Chem.), 1955, (19), 44094). A method has been worked out for separating as a concentrate the neutral oxygen compounds from the dephenolized and undephenolized diesel fraction of shale tar. Separation was effected by solvent extraction with methyl alcohol, which does not react with the compounds. The concentrate of compounds from the undephenolized fraction was obtained by treatment with 95% methyl alcohol by a three-stage pseudo-countercurrent method. The extract obtained, into which 91% of the neutral oxygen compounds in the original fraction were extracted, contains 27 to 28% phenols, 64 to 65% neutral oxygen compounds and 7 to 8% hydrocarbons; it is diluted with water, the hydrocarbon layer formed is removed, then the methyl alcohol is distilled off and after dephenolization a concentrate of neutral oxygen compounds is obtained. Extraction of the compounds from the dephenolized fraction is effected by three consecutive treatments with 100% methyl alcohol. The three extracts obtained are mixed together, diluted with 15% water, separated from the hydrocarbon layer and after the methyl alcohol has been distilled off a 100% concentrate of neutral oxygen compounds is obtained (determined with ferric chloride). The method enables a study of the chemical nature and properties of the neutral oxygen compounds in shale tar to be made.

Semenov, S.S.

Polymerization of olefins from shale tar to lubricating oils

in the presence of aluminum chloride. S. S. Semenov and B. R. Gorevich. *Trudy Vsesoyuz. Nauch.-Issled. Inst. po Pererabotke Slantsev* 1954, No. 2, 89-101; *Refrai. Zhur., Khim.* 1955, No. 8229. — Polymerization of Bait c shale tar fractions was carried out under lab. conditions at 100-25°, stirring for 25-30 hrs., in the presence of 7.5-10% $AlCl_3$. The fractions studied were gasoline, end b.p. 160-225°, ligroine 180-230°, and Diesel fuel 225-325°. Polymerization of the crude dephenolized fractions contg. an appreciable amt. of neutral O compds. as well as aromatic hydrocarbons and S compds. gave oils of very low quality. Thus, an oil obtained from the fraction with an end b.p. 225° had a viscosity index below 40 and its stability was so low that a semidry sticky film formed on the surface of the oil and the walls of the vessel after 1-1.5 months' storage. Removal of neutral O compds. from these fractions by means of $FeCl_3$ or $SnCl_4$ reacting with H_2SO_4 (15%) or treatment with activated clay raised the viscosity index to 40-50, prevented film formation, and doubled the yield. The ligroine and Diesel fuel fractions were treated with MeOH at room temp. prior to polymerization in order to obtain oil of a better quality. The resulting oils had a viscosity index of 40-10 and the yield of oil from the ligroine fraction was 25-27% and from the Diesel-fuel fraction 31-33%. In spite of their unsat., these oils were quite stable and approach the properties of petroleum oils. Large-scale tests confirmed lab. results. In addn. to lubricating oils, 32-37% of a product was obtained which had a cetane no. over 54 and was suitable as Diesel fuel.

M. Hoseh

JHM

LFH

SEME NOV 55.

✓ 401. STABILITY OF DEER. FUEL FROM LOW TEMPERATURE TAR OF BALTIC SHALES.
Babenov, S.S. and Gurevich, I.E. (Trud. Vsesoyuz. nauch.-issled. inst. Petrol.
Sian. (Proc. Inst. Treat. Shale, U.S.S.R.), 1954, (2), 102-103; also in Ref.
Zh. Khim. (Ref. J. Chem. Moscow), 1957, (10), 35314).

1-4/11
11/4E3d

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SEMENOV, S.S.; KORNILOVA, Yu.I.

Action of alcohol-alkali solution on organic matter of Baltic
shales. Trudy VNIIPS no.3:5-10 '55. (MLRA 8:12)
(Baltic Sea region--Oil shales) (Hydrocarbons)

SEMENOV, S.S.; KORNILOVA, Yu.I.; GUREVICH, B.Ye.; ORLOVA, N.S.

Detection and analysis of functional groups in organic matter of
Baltic shales. Trudy VNIIPS no.3:11-15 '55. (MLRA 8:12)
(Baltic Sea region--Oil shales) (Hydrocarbons)

SEMENOV, S.S.; ORLOVA, N.S.

Varieties of organic matter in Baltic shales. Trudy VNIIPS no.3:
16-21 '55. (MLRA 8:12)
(Baltic Sea region--Oil shales) (Hydrocarbons)

SEMENOV, S.S.; GUREVICH, B.Ye.

Thermal decomposition of organic matter in Baltic shales by means
of preliminary reaction of chemical reagents on its functional
grouping. Trudy VNIIPS no.3:22-26 '55. (MIRA 8:12)
(Baltic Sea region--Oil shales) (Hydrocarbons)

SEMEHOV, S.S.

Genetic classification of mineral fuels. Trudy VNIIPS no.4:18-56
'55. (MIRA 13:4)

(Fuel--Classification)

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of
Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62541

Author: Zelenin, N. I., Semenov, S. S.

Institution: None

Title: Concerning the Cracking of Shale Tar and Its Fractions

Original

Periodical: Tr. Vses. n.-i. in-ta po pererabotke slantsev, 1955, No 4, 161-166

Abstract: It is noted that residues obtained on fractionation of the tar of
Bel'ts'kaya shalya

SEME NOV, S. S.

310. HYDROGENATION OF ACID AND NEUTRAL COMPONENTS OF THE RESIDUE FROM
 GENERATOR SHALE OIL BOILING AT OVER 325°C. Glushenkova, E.V. and
 Semenov, S.S. (Trud. Vsesoyuz. nauch.-issled. inst. Pererab. slan. (Proc.
 Inst. Treat. Shale, U.S.S.R.), 1955, (4), 167-174; abstr. in Ref. Zh. Khim.
 (Ref. J. Chem., Moscow), 1956, (20), 65974). Preliminary data are given on
 the hydrogenation of components of oil from low temperature carbonisation of
 shale. Hydrogenation was carried out in the presence of 1% iron and tungsten
 catalysts at 375-400°C and 150 atm.

SEMENOV, S.S.

~~_____~~
Possibilities and methods for studying the chemical structure of
mineral fuels. Trudy VNIIPS no.5:29-78 '56. (MLRA 10:5)
(Fuel)

GUREVICH, B.Ye.; SEMENOV, S.S.

Producing alcohols by hydration of alkenes from gasoline
fractions of shale tar. Trudy VNIIPS no.6:197-205 '58.

(MIRA 11:8)

(Alcohols) (Oil shales)

GLUSHENKOVA, Ye.V.; SEMENOV, S.S.

Formation of phenols during liquid-phase hydrogenation of
acid and neutral constituents. Trudy VNIIPS no.6:206-215 '58.
(MIRA 11:8)

(Phenols) (Oil shales)

Semenov, S.S.

11(2,4)

PHASE I BOOK EXPLOITATION SOV/3335

Vsesoyuznyy nauchno-issledovatel'skiy institut pererabotki i ispol'zovaniya topliva

Khimiya i tekhnologiya topliva i produktov yego pererabotki, vyp. 8
(Chemistry and Technology of Fuel and Products of Refining, Nr 8)
Leningrad, Gostoptekhizdat Otd, 1959. 247 p. (Series: Its:
Trudy) Errata slip inserted. 2,500 copies printed.

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Yashchurzhinskaya; Editorial Board of series: E.S. Bezmozgin,
A.Ye. Drabkin, D.K. Kollerov, S.S. Semenov, A.S. Sinel'nikov,
and A.S. Foteyev.

PURPOSE: This collection of articles is intended for scientific,
engineering and technical personnel in plants of the fuel and gas
industry.

COVERAGE: The results of research and experimental work carried out
Card 1/6

Chemistry and Technology (Cont.)

SOV/3335

in 1957 and 1958 by the All-Union Scientific Research Institute for Shale Processing are summarized in this collection. Organic components of oil shale from various regions, their chemical composition, and physical and chemical properties are reviewed, along with the production of gas from oil shale. Also discussed are: semicoking of oil shale, analysis of oil shale and shungite, fractionation of tar obtained in oil shale semicoking, conversion of fan and the equipment used, hydrogenation of diesel fuel produced from oil shale, extraction of phenol, and purification of tarry waters by anionite and formaldehyde. Most articles are accompanied by references. In addition, the book contains an annotated bibliography of 126 Soviet and non-Soviet works on the processing of oil shales.

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SOV/3335

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SOV/3335

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SEMENOV, S.S.; GULYAYEVA, L.I.; DRABKIN, A.Ye.; KOBYL'SKAYA, M.V.; KUZ'MINA,
N.A.

Formation of polymer depositions in shale-gas pipelines.
Trudy VNIIPS no.7:198-208 '59. (MIRA 12:9)
(Oil shales) (Gas--Pipelines)

KOBYL'SKAYA, M.V.; SEMENOV, S.S.; GLUSHENKOVA, Ye.V.; SHUL'MAN, Z.F.

Composition and methods of processing retort gasoline obtained
during the gasification of Baltic oil shales. Trudy VNIIPS no.7:
209-216 '59. (MIRA 12:9)
(Oil shales) (Gasoline)

SEMENOV, S.S.; GUREVICH, B.Ye.; Prinimali uchastiye: KONDRASHOVA, R.K.;
NIKOLAYEVA, A.I.

Hydration of alkenes contained in shale-gasolines from tunnel ovens
for the production of alcohols. Trudy VNIIPS no.7:267-275 '59.
(MIRA 12:9)

(Oil shales) (Gasoline) (Alcohols)

KORNILOVA, Yu.I.; SEMENOV, S.S.

Investigating the organic matter of oil shales from the Kashpir
field. Trudy VNIIT no.8:4-13 '59. (MIRA 13:4)
(Kashpir--Oil shales)

SEMENOV, S.S.; KORNILOVA, Yu.I.; DOKSHINA, N.D.

Methylation of oil shale kerogen by diazomethane. Trudy VNIIT
no.8:28-34 '59. (MIRA 13:4)
(Oil shales) (Kerogen) (Methylation)

SEMENOV, S.S.; ZABRODIN, V.I.

System for the condensation and cooling of the vapor products
obtained in the semicoking of oil shales. Trudy VNIIT no.8:
75-81 '59, (MIRA 13:4)
(Oil shales)

SEMENOV, S.S.

Selective separation of intermediate fractions of shale oils
from the semicoking of Baltic oil shales. Trudy VNIIT no.8:
163-175 '59. (MIRA 13:4)
(Oil shales)

SEMENOV, S.S.

Dynamic equilibrium in a column for refining the intermediate fractions of shale oil by means of methanol. Trudy VNIIE no.8:189-197. '59. (MIRA 13:4)

(Oil shales)

GUREVICH, B.Ye.; MEMIROVSKIY, A.N.; YEFIMOV, V.A.; SHMAGIN, Ya.G.;
Prinimali uchastiye: Semenov, S.S., kand.tekhn.nauk; NIKOLAYEVA,
A.I., tekhnik

Production of oil shale diesel fuel. Khim. i tekhn. gor. slan.
i prod. ikh perer. no.8:84-101 '60. (MIRA 15:2)
(Diesel fuels)
(Oil shales)

SEMENOV, S.S.; GUREVICH, B.Ye. Prinimali uchastiye: NIKOLAYEVA, A.I.,
tekhnik; RAYAVEYE, E.L. [Rajaväe, E.]; KAL'BERG, A.O. [Kalberg, A.]
inzh.

Production of higher alcohols from the natural gas gasoline of
tunnel kilns in a pilot plant. Trudy VNIIT no.9:91-98 '60.
(MIRA 13:11)

1. Kombinat Kõkhtla-Yarve (for Rayaveye). 2. Institut slantsev
Estonskogo Soveta narodnogo Khozyaystva (for Kal'berg).
(Alcohols) (Oil shales)

SEMENOV, S.S.; GLUSHENKOVA, Ye.V.

Hydrofining of tar phenols obtained in the semicoking of Baltic
oil shales. Trudy VNIIT no.9:99-109 '60. (MIRA 13:11)
(Phenols) (Oil shales)

SEMENOV, S.S.; ZAV'YALOV, V.G.

Recovery of phenols from oil-shale fractions without use of alkalis. Trudy VNIIT no.9:124-133 '60. (MIRA 13:11)
(Phenols) (Oil shales)

SEMENOV, S.S.; GLUSHENKOVA, Ye.V.; DOKSHINA, N.D.

Composition and properties of asphaltite found in a shale bed of
one of the mines of the "Slantsy" combine. Trudy VNIIT no.10:23-
28 '61. (MIRA 15:3)

(Shale)(Asphaltite)

SEMENOV, S.S.; DYMSHITS, S.A.; BITUK, S.M.; PARSHINA, Ye.P.; ORLOVA, N.S.

Potential phenol content of shale oil from semicoking of shales
at the "Slantsy" combint. Trudy VNIIT no.10:166-174 '61.

(MIRA 15:3)

(Shale oils)(Phenols)

SEMENOV, S.S.; SHPIL'FOGEL', P.V.; ARSHANSKIY, A.M.; SHKLYAYEVA, A.P.

Concentrated shale as an organomineral filler in molded powders
of phenolic plastics obtained by the emulsion method. Trudy VNIIT
no.10:180-188 '61. (MIRA 15:3)
(Phenol condensation products)(Shale)

S/672/62/000/011/002/011
D403/D307

AUTHORS: Shlyk, V. Ya., Avanova, A. I., Tumanova, Ye. S. and
Semenov, S. S.

TITLE: Application of enriched shale as a filler in ebonite
mixtures

SOURCE: Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut
pererabotki i ispol'zovaniya topliva. Trudy. no. 11,
1962. Khimiya i tekhnologiya topliva i produktov yego
pererabotki, 28-34

TEXT: The present work was carried out in Laboratoriya khimicheskikh produktov VNIIT (Laboratory of Chemical Products VNIIT) and Tsentral'naya laboratoriya zavoda rezino-tekhnicheskikh izdeliy (RTI) Lensovnatkhoza (Central Laboratory of the Rubber Articles Factory of Lensovnarkhoz), using GOST methods for the testing of rubber. Mixtures based on KCC-30 and KKB (SKS-30 and SKB) rubbers and on reclaimed rubber were prepared, using shales enriched in kerogen as fillers; ebonite dust filler was also tried for compa-

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Application of enriched ...

S/672/62/000/011/002/011
D403/D307

rison. A number of samples containing various proportions of filler were prepared and their physical and mechanical properties were determined. It was found that the kerogen filler degraded the strength properties of the products, but increased the hardness and heat resistance; the filler is also highly inert chemically. Kerogen-filled ebonites can be subjected to the usual technological processing. The authors express their gratitude to the Kafedra reziny im. B. V. Byzova, LTI im. Lensoveta (Rubber Department im. B. V. Byzov, LTI im. Lensovet) for experimental facilities and consultations. There are 5 tables.

Card 2/2

S/672/62/000/011/006/011
D403/D307

AUTHORS: Glushenkova, Ye. V., Zabrodkin, A. G., Liyeva, V. Yu.
and Semenov, S. S.

TITLE: Adhesive resins from hydrogenation phenols

SOURCE: Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut pererabotki i ispol'zovaniya topliva. Trudy. no. 11, 1962. Khimiya i tekhnologiya topliva i produktov yego pererabotki, 120-126

TEXT: The present work is an indirect continuation of earlier studies at TsNIIIFM, together with Institut slantsev ESNKh (Shale Institute ESNKh) (Trudy In-ta slantsev ESNKh, no. 9, Gostoptekhnizdat, 1960) and VNIIT (Trudy VNIIT, no. 9, Gostoptekhnizdat, 1960); the investigation was directed at using the substances obtained by the hydrogenation purification of shale phenols as the raw material for the production of adhesive resins. Hydropurification phenols (I) and phenols obtained during the hydrogenation of generator tar residues above 325°C (II) were used to make the resins. The adhe-

Card 1/2

Adhesive resins from ...

S/672/62/000/011/006/011
D403/D307

sives were tried on plywood and bakelite-treated plywood, at 140 - 150°C, and under 18 - 23 and 35 - 40 kg/cm² respectively. It was found that I and II resins may be used as adhesives with additions of 25% of tricresol by weight. In the absence of additives I and II resins may only serve as adhesives of the pressing times are increased by 50 - 100%. The adhesives are also improved by additions of 5.8 - 6.5% of resorcinol or technical dimethylresorcinol; such glues are suitable for bakelite-treated plywood. There are 7 tables.

Card 2/2

S/672/62/000/011/007/011
D403/D307

AUTHORS: Kobyl'skaya, M. V., Pyshkina, N. I. and Semenov, S. S.

TITLE: On the problem of utilization of the xylene fractions of the pyrolysate of gaseous benzine from chamber furnaces

SOURCE: Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut pererabotki i ispol'zovaniya topliva. Trudy. no. 11, 1962. Khimiya i tekhnologiya topliva i produktov yego pererabotki, 127-133

TEXT: The xylene fraction considered boils largely between 136 and 140°C, and contains 65 - 70% xylenes and ethylbenzene; and 20 - 30% styrene; the xylenes are: (o-xylene and PhEt 60 - 65%, m-xylene 20 - 25%, p-xylene 10 - 12%). The fraction cannot be used as a xylene mixture without prior removal of styrene, which is of interest in chemical industry, especially in the production of varnishes. The authors have therefore studied the possibilities of polymerizing styrene in the mixture and condensing it with maleic

Card 1/2

On the problem of ...

S/672/62/000/011/007/011
D403/D307

anhydride and alkyd resins. Studies on the preparation of varnishes were mostly carried out with the 120 - 150° xylene fraction. Polymerizations at 100°C with benzoyl peroxide and azobisisobutyrodinitrile, anh. AlCl_3 and H_2SO_4 were tried, distilling off the xylenes at the end of reaction. The reaction proceeded less readily than when pure styrene was polymerized in xylene under otherwise analogous conditions; under optimum conditions (72 hours at 100°C, with 0.5% of benzoyl peroxide) only ~36% of styrene was polymerized. The yields may be increased by concentrating the styrene prior to polymerization, and with the dinitrile initiator. AlCl_3 and H_2SO_4 initiators were unsuccessful. In further work, the authors tried to prepare an MC-25 (MS-25) type varnish from the xylene fraction and ФТН (FTP) alkyd base, at 140 - 150°C, over 30 - 72 hours. The optimum results were obtained at 150°C and 72 hours (76.6 - 80.7% of styrene reacted). The use of a wider (120 - 150°C) xylene fraction is recommended. There are 6 tables.

Card 2/2

SEMENOV, S. S.; BITUK, S. M.; DYMSHITS, S. A.; BROY-KARRE, G. V.

Continuous distillation of shale tars and phenols on a pilot
device. Trudy VNIIT no. 11:134-143 '62. (MIRA 17:5)

ZAV'YAI'OV, V. G.; SEMENOV, S. S.

Testing the methanol method of separating a diesel fraction of
shale tar. Trudy VNIIT no. 11:155-167 '62. (MIRA 17:5)

DYMSHITS, S.A.; SEMENOV, S.S.; PARSHINA, Ye.P.; ORLOVA, N.S.; BITUE, YE.M.

Studying the composition of phenols evolved from the generator car
of the "Shale" Combine. Trudy VNIIT no.13:66-73 '64.

(MIRA 18-2)

KONOPLYANTSEV, A.A.; KOVALEVSKIY, V.S.; SEMENOV, S.S.

Some regional characteristics of the regime of ground waters in
the U.S.S.R. Sov. geol. 7 no.9:121-125 S '64. (MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i
inzhenernoy geologii.

SEMENOV, S.S.; ZAV'YALOV, V.G.; KUZNETSOVA, O.A.

Investigating the composition of the brown oil of a natural gasoline
pyrolizate. Trudy VNIIT no.13:22-30 '64.

(MIRA 18:2)

GLADILINA, Ye.M.; ZAV'YALOV, V.G.; KOZLOV, N.N.; PETRUNIN, M.M.;
PYSHKINA, N.I.; SEMENOV, S.S.

MS-25 lacquer on a base of the styrene-xylene fraction of a
pyrolizate of chamber natural gasoline. Trudy VNIIT no.13:
31-37 '64. (MIRA 18:2)

SEMENOV, S.S.; ZAV'YALOV, V.G.; SOLOV'YEV, Yu.A.

Pyrolysis of petroleum fractions in a laboratory pipestill.
Trudy VNIIT no.13:38-44 '64. (MIRA 18:2)

GLUSHENKOVA, Ye.V.; DYNSHITS, S.A.; KURAYTIS, S.A.; MARKICHEV, I.I.;
SEменов, S.S.; SOKHOR, R.A.; FILIPPOVA, N.B.

Obtaining tanning agents from the phenols of shale tar. Trudy
VNIIT no.13:101-108 '64.

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TITLE: Starting of a new accelerator - symmetrical annular FM <u>synchrotron</u> of the Physics Institute im. P. N. Lebedev AN SSSR			
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ABSTRACT: This is a brief report of the starting of a new experimental symmetrical annular FM synchrotron (KF installation). It is a strong-focusing accelerator with constant magnetic field, in which the time variation of the magnetic field is replaced by a radial increase of the field in accordance with the growth of the particle energy. The accelerator was proposed by one of the authors (Kolomenskiy, ZhETF v. 33, 298, 1957; Atomnaya energiya v. 3, 492, 1957) and its construction is described in detail elsewhere (V. N. Kamunnikov et al., in: Trudy Mezhdunarodnoy konferentsii po uskori-telyam, Dubna, 1963 [Transactions of International Conference on Accelerators, Dubna, 1963] Atomizdat, 1964, p. 653). The article describes briefly the magnet, the initial operation, the accelerating system, the electron injection, and some of the prelimi-nary results. The authors thank <u>V. S. Voronin, D. D. Krasil'nikov, A. N. Lebedev, O. A. Smirnov, V. M. Gapanovich, N. V. Platonov, G. T. Ponomarev, V. A. Ryabov, Ye.</u>			
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Dephenolization of waste water in East European countries. Gaz. prom.
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